CISCO ROUTER SHOW COMMANDS

SHOW COMMANDS

The **show** commands are powerful monitoring and troubleshooting tools. You can use the **show** commands to perform a variety of functions:

- *Monitor router behavior during initial installation and monitor normal network operation*
- *Isolate problem interfaces, nodes, media, or applications*
- *Determine when a network is congested*
- *Determine the status of servers, clients, or other neighbors*

*Following are some of the most commonly used **show** commands:*

Show access-lists	Shows the access lists configured on the router and which interface they have been applied too
Show buffers	shows the status of the routers buffer pool
Show clock	shows the routers current date and time
Show controller <interface>	displays various statistics for interface card controllers also shows the cable type attached to the interface. *ex: t1, cxbus, token*
Show decnet map	Displays the address mapping information used by the DECnet Address Translation Gateway
Show decnet route {decnet-address}	Displays the DECnet routing table and if the option is specified the first hop route to that address is displayed
Show DECnet static	Displays all statically configured routes
Show decnet traffic	Displays the DECnet traffic statistics, including datagrams sent, received, and forwarded
Show env ?	provides you with a list of the different environmental commands you can use they will tell you current hardware operating values, temperatures, manufacturer and other information. If these values become of concern they will be reported as an environmental alarm in the log. See endnotes for samples [i]
show flash	shows the name/version of the IOS currently running in the router and the number of bytes used
show flash all	shows how much flash memory is free, determines if you have enough memory for a upgrade
show fr lmi	checks LMI status which should be increasing
show fr map	checks frame relay DLCI status to see if the router knows about other circuits. The bandwidth displayed here is received from the frame switch and is the CIR of the pvc from the router to the switch. This is different from the port speed which is data clocking from router to frame switch
show fr pvc	checks PVC and DLCI status when displayed it will also show if traffic has exceeded the circuits CIR by setting the DE (discard eligible) value. It can also tell you about forward and backward congestion on the circuit (FECN & BECN)
show hardware	displays command will give a complete listing of the router hardware, memory, etc…
show int	Displays network interface statistics *ex: ethernet, tokenring, fddi, atm, serial*
show interface accounting	shows a overview of the protocols going through the router <<undocumented command>>
show interface statistics	shows various statistics for each interface based upon packets processed and characters processed by interface <<undocumented command>>
show interface switching	shows packet processing by interface and with stats for each protocol <<undocumented command>>
show ip arp	shows the IP ARP table
show ip ospf int	checks the OSPF status on a interface
show ip <interface>	shows the protocol configured on each interface
show ip int brief	gives a brief description of the IP interfaces status
show ip <protocol> int <interface>	this command shows information for the designated protocol on the desired interface. *ex: sho ip ospf int s0*
show ip route	checks the IP routing table
Show ip route summary	Displays summary information about entries in the routing table
show ipx	shows the current Novell IPX status
show ipx int	shows the ipx interfaces and their mac addresses
show ip protocol	shows routing information, to include gateways and summarization
show ip traffic	shows the IP traffic going through the router
show ipx server	shows which servers and hubs the router knows about

show line	shows which lines are active in a router
show log	shows the routers log, if logging enabled
show protocols	shows all the various types of protocols being used by the router
show <protocol> interface	also see show ip interface, this command will also shown you what type of switching method is being used, fast switching is the default.
show mem	shows the amount of memory in the router and how it is being used, including free pool memory
Sho mem dead	First, "dead" means that the process has terminated, but not yet been deleted. Secondly, **Dead** gives the processes as a group that are now dead. The archives on this indicate that the pointer is a single memory location and the **dead** process is like an orphaned process in UNIX. This is not necessarily a "bad" field, unless the amount of "dead" memory increases enough to affect performance. The only way to clear the "dead" memory/processes is a reload of the router, again this is similar to UNIX with orphaned processes.
show processes	shows the CPU utilization and the processes running
show running-config	displays the router configuration currently running
show startup-config	displays the router configuration stored in nonvolatile (NVRAM)
show smds map	used to check the smds tables
show source	shows the router source route information
show stacks	displays information about the stack utilization of processes and interrupt routines, as well as the reason for the last system reboot
show tcp	checks the TCP connection
show tech-support	provides automatic listing of many different types of sho commands. This command is excellent if logging to your workstation.
show ver	shows router up time, IOS version, how it booted, and the physical characteristics of the router

There are hundreds of other **show** commands available. For details on using and interpreting the output of specific **show** commands, refer to the Cisco IOS command references.

Remember that if you want to see the various options for commands use the routers built in help system. By either entering ? at the command prompt or <<command>> ? for a full list of options.

KEYBOARD COMMANDS

Keystroke	Effect
Arrow keys	♦ Useful only with an ANSO/VT100 emulating terminal. ♦ Left and right arrow move the cursor left or right one character within the current line. ♦ Up and down arrow display the previous or next lines from the command history buffer
Backspace	Delete character before cursor
DEL	Delete character before cursor
TAB	Command completion
?	Help
Ctrl A	Move cursor to beginning of line
Ctrl B	Back cursor up one character
Ctrl C	
Ctrl D	Delete the character the cursor is on
Ctrl E	Move cursor to end of line
Ctrl F	
Ctrl G	
Ctrl H	Delete character before cursor
Ctrl I	Command completion
Ctrl J	
Ctrl K	Delete characters to end of line (characters go to cut buffer; see Ctrl Y)
Ctrl L	Redisplay line
Ctrl M	
Ctrl N	Bring up the next line from the command history buffer
Ctrl O	
Ctrl P	Bring up the previous line from the command history buffer

Ctrl Q	
Ctrl R	Retype line (useful when debug output trashes the screen)
Ctrl S	
Ctrl T	Transpose characters
Ctrl U	Delete characters to beginning of line (characters go to cut buffer)
Ctrl V	Quoted insert (take the character literally instead of as editor command, used to insert control character)
Ctrl W	Delete previous word
Ctrl X	Delete characters to beginning of line (characters go to cut buffer)
Ctrl Y	Yank: restore cut characters from buffer after cursor
Ctrl Z	
Esc <	Show first line from command history buffer
Esc >	Show last line form command history buffer
Esc O	Escape prefix sent by VT100 terminal prior to code for arrow key
Esc Q	Quoted insert (take the next character literally instead of as editor command, used to insert control character)
Esc [	Escape prefix sent by VT100 terminal prior to code for arrow key
Esc b	Move cursor back one word
Esc c	Capitalize word after cursor
Esc d	Delete word (from cursor forward)
Esc f	Move cursor forward one word
Esc I	TAB
Esc l	Change word after cursor to lowercase
Esc q	Quoted insert (take the next character literally instead of as editor command, used to insert control character)
Esc u	Change word after cursor to uppercase
Esc y	Switch to previous cut buffer and (yank) it at cursor
Esc Del	Delete word before cursor

CLOCK COMMANDS

clock set hh:mm:ss dd month yyyy	this command sets the date and time in the router from the enable prompt *ex: clock set 09:06:00 19 APR 1997*
clock timezone XXX 0	this command will allow you to set the correct time zone (EST, CST, MST, PST) the router resides in. *ex: clock timezone CST 0*
clock summer-time XXX recurring	this command sets daylight savings time in the router (EST, CST, MST, PST) *ex: clock summer-time EST recurring*
service timestamps log datetime localtime show-timezone	this command will mark all router log entries with the date, time, etc. on each entry as it is posted in the log

[i] Sample displays for the Cisco 7200 series: *%ENVM-4-ENVWARN: Chassis outlet 3 measured at 55C/131F* which is telling you the voltage or temperature has entered the warning range, *%ENVM-2-ENVCRIT: +3.45 V measured at +3.65 V* which is telling you the voltage or temperature has entered the critical range, and the types of messages can continue to include environmental shutdown notification and power supply shutdown.